Reference Material

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Construction Site BMP Consideration Form

Project Evaluation Process for the Consideration of Construction Site BMPs

DATE:
EA:

NO.	CRITERIA	YES	NO	SUPPLEMENTAL INFORMATION
1.	Will construction of the project result in areas of disturbed soil as defined by the Project Planning and Design Guide (PPDG)?	☐	☐	If **Yes**, Construction Site BMPs for Soil Stabilization (SS) will be required. Complete CS-1, Part 1. Continue to 2. If **No**, Continue to 3.
2.	Is there a potential for disturbed soil areas within the project to discharge to storm drain inlets, drainage ditches, areas outside the right of way, etc?	☐	☐	If **Yes**, Construction Site BMPs for Sediment Control (SC) will be required. Complete CS-1, Part 2. Continue to 3.
3.	Is there a potential for sediment or construction related materials and wastes to be tracked offsite and deposited on private or public paved roads by construction vehicles and equipment?	☐	☐	If **Yes**, Construction Site BMPs for Tracking Control (TC) will be required. Complete CS-1, Part 3. Continue to 4.
4.	Is there a potential for wind to transport soil and dust offsite during the period of construction?	☐	☐	If **Yes**, Construction Site BMPs for Wind Erosion Control (WE) will be required. Complete CS-1, Part 4. Continue to 5.
5.	Is dewatering anticipated or will construction activities occur within or adjacent to a live channel or stream?	☐	☐	If **Yes**, Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5. Continue to 6.
6.	Will construction include saw-cutting, grinding, drilling, concrete or mortar mixing, hydro-demolition, blasting, sandblasting, painting, paving, or other activities that produce residues?	☐	☐	If **Yes**, Construction Site BMPs for Non-Storm Water Management (NS) will be required. Complete CS-1, Part 5. Continue to 7.
7.	Are stockpiles of soil, construction related materials, and/or wastes anticipated?	☐	☐	If **Yes**, Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 8.
8.	Is there a potential for construction related materials and wastes to have direct contact with precipitation; storm water run-on, or stormwater runoff; be dispersed by wind; be dumped and/or spilled into storm drain systems?	☐	☐	If **Yes**, Construction Site BMPs for Waste Management and Materials Pollution Control (WM) will be required. Complete CS-1, Part 6. Continue to 9.
9.	End of checklist.		Document for Project Files by completing this form, and attaching it to the SWDR.	

PE to initialize after concurrence with Construction (PS&E only) *Date*

Construction Site BMPs
Checklist CS-1, Part 1

Prepared by: _____ Date: _____ District-Co-Route: _____

PM (KP): _____ EA: _____

RWQCB: _____

Soil Stabilization

General Parameters

1. How many rainy seasons are anticipated between beginning and end of construction? _____
2. What is the total disturbed soil area for the project? (ac) _____
   (a) How much of the project DSA consists of slopes 1V:4H or flatter? (ac) _____
   (b) How much of the project DSA consists of 1V:4H < slopes < 1V:2H? (ac) _____
   (c) How much of the project DSA consists of slopes 1V:2H and steeper? (ac) _____
   (d) How much of the project DSA consists of slopes with slope lengths longer then 20 ft? (ac) _____
3. What rainfall area does the project lie within? (Refer to Table 2-1 of the Construction Site Best Management Practices Manual) _____
4. Review the required combination of temporary soil stabilization and temporary sediment controls and barriers for area, slope inclinations, rainy and non-rainy season, and active and non-active disturbed soil areas. (Refer to Tables 2-2, and 2-3 of the Construction Site Best Management Practices Manual for Rainfall Area requirements.) ☐ Complete

Scheduling (SS-1)

5. Does the project have a duration of more then one rainy season and have disturbed soil area in excess of 25 acres? ☐Yes ☐No

   (a) Include multiple mobilizations (Move-in/Move-out) as a separate contract bid line item to implement permanent erosion control or revegetation work on slopes that are substantially complete. (Estimate at least 6 mobilizations for each additional rainy season. Designated Construction Representative may suggest an alternate number of mobilizations.) ☐ Complete

   (b) Edit Order of Work specifications for permanent erosion control or revegetation work to be implemented on slopes that are substantially complete. ☐ Complete

(c) Edit permanent erosion control or revegetation specifications to require seeding and planting work to be performed when optimal. ☐ Complete

Preservation of Existing Vegetation (SS-2)

6. Do Environmentally Sensitive Areas (ESAs) exist within or adjacent to the project limits? (Verify the completion of DPP-1, Part 5) ☐ Yes ☐ No

   (a) Verify the protection of ESAs through delineation on all project plans. ☐ Complete

   (b) Protect from clearing and grubbing and other construction disturbance by enclosing the ESA perimeter with high visibility plastic fence or other BMP. ☐ Complete

7. Are there areas of existing vegetation (mature trees, native vegetation, landscape planting, etc.) that need not be disturbed by project construction? Will areas designated for proposed treatment BMPs need protection (infiltration characteristics, vegetative cover, etc.)? (Coordinate with District Environmental and Construction to determine limits of work necessary to preserve existing vegetation to the maximum extent practicable.) ☐ Yes ☐ No

   (a) Designate as outside of limits of work (or designate as ESAs) and show on all project plans. ☐ Complete

   (b) Protect with high visibility plastic fence or other BMP. ☐ Complete

8. If yes for 6, 7, or both, then designate ESA fencing as a separate contract bid line item, *if not already incorporated as part of design pollution prevention work (See DPP-1, Part 5).* ☐ Complete

Slope Protection

9. Provide a soil stabilization BMP(s) appropriate for the DSA, slope steepness, slope length, and soil erodibility. (Consult with District/Regional Landscape Architect.)

   (a) Select SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-6 (Straw Mulch), SS-7 (Geotextiles, RECPs, Etc.), SS-8 (Wood Mulching), other BMPs or a combination to cover the DSA throughout the project's rainy season. ☐ Complete

   (b) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest an alternate increase.) ☐ Complete

   (c) Designate as a separate contract bid line item. ☐ Complete

Slope Interrupter Devices

10. Provide slope interrupter devices for all slopes with slope lengths equal to or greater than of 20 ft in length. (Consult with District/Regional Landscape Architect and Designated Construction Representative.)

    (a) Select SC-5 (Fiber Rolls) or other BMPs to protect slopes throughout the project's rainy season. ☐ Complete

    (b) For slope inclination of 1V:4H and flatter, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 20 ft on center. ☐ Complete

    (c) For slope inclination between 1V:4H and 1V:2H, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 15 ft on center. ☐ Complete

    (d) For slope inclination of 1V:2H and greater, SC-5 (Fiber Rolls) or other BMPs shall be placed along the contour and spaced 10 ft on center. ☐ Complete

    (e) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest alternate increase.) ☐ Complete

    (f) Designate as a separate contract bid line item. ☐ Complete

Channelized Flow

11. Identify locations within the project site where concentrated flow from stormwater runoff can erode areas of soil disturbance. Identify locations of concentrated flow that enters the site from outside of the right-of-way (off-site run-on). ☐ Complete

    (a) Utilize SS-7 (Geotextiles, RECPs, etc.), SS-9 (Earth Dikes/Swales, Ditches), SS-10 (Outlet Protection/Velocity Dissipation), SS-11 (Slope Drains), SC-4 (Check Dams), or other BMPs to convey concentrated flows in a non-erosive manner. ☐ Complete

    (b) Designate as a separate contract bid line item. ☐ Complete

Construction Site BMPs
Checklist CS-1, Part 2

Prepared by: _____ Date: _____ District-Co-Route: _____

PM (KP): _____ EA: _____

RWQCB: _____

Sediment Control

Perimeter Controls - Run-off Control

1. Is there a potential for sediment laden sheet and concentrated flows to discharge offsite from runoff cleared and grubbed areas, below cut slopes, embankment slopes, etc.? ☐Yes ☐No

   (a) Select linear sediment barrier such as SC-1 (Silt Fence), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or a combination to protect wetlands, water courses, roads (paved and unpaved), construction activities, and adjacent properties. (Coordinate with District Construction for selection and preference of linear sediment barrier BMPs.) ☐ Complete

   (b) Increase the quantities by 25% for each additional rainy season. (Designated Construction Representative may suggest an alternate increase.) ☐ Complete

   (c) Designate as a separate contract bid line item. ☐ Complete

Perimeter Controls - Run-on Control

2. Do locations exist where sheet flow upslope of the project site and where concentrated flow upstream of the project site may contact DSA and construction activities? ☐Yes ☐No

   (a) Utilize linear sediment barriers such as SS-9 (Earth Dike/Drainage Swales and Lined Ditches), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or other BMPs to convey flows through and/or around the project site. (Coordinate with District Construction for selection and preference of perimeter control BMPs.) ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

Storm Drain Inlets

3. Do existing or proposed drainage inlets exist within the project limits? ☐Yes ☐No

   (a) Select SC-10 (Storm Drain Inlet Protection) to protect municipal storm drain systems or receiving waters wetlands at each drainage inlet. (Coordinate with District Construction for selection and preference of inlet protection BMPs.) ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

4. Can existing or proposed drainage inlets utilize an excavated sediment trap as described in SC-10 (Storm Drain Inlet Protection- Type 2)? ☐Yes ☐No

   (a) Include with other types of SC-10 (Storm Drain Inlet Protection). ☐ Complete

Sediment/Desilting Basin (SC-2)

5. Does the project lie within a Rainfall Area where the required combination of temporary soil stabilization and sediment control BMPs includes desilting basins? (Refer to Tables 2-1, 2-2, and 2-3 of the Construction Site Best Management Practices Manual for Rainfall Area requirements.) ☐Yes ☐No

   (a) Consider feasibility for desilting basin allowing for available right-of-way within the project limits, topography, soil type, disturbed soil area within the watershed, and climate conditions. Document if the inclusion of sediment/desilting basins is infeasible. ☐ Complete

   (b) If feasible, design desilting basin(s) per the guidance in SC-2 Sediment/ Desilting Basins of the Construction Site BMP Manual to maximize capture of sediment-laden runoff. ☐ Complete

   Designate as a separate contract bid item. ☐ Complete

6. Will the project benefit from the early implementation of proposed permanent Treatment BMPs? (Coordinate with District Construction.) ☐Yes ☐No

   (a) Edit Order of Work specifications for permanent treatment BMP work to be implemented in a manner that will allow its use as a construction site BMP. ☐ Complete

Sediment Trap (SC-3)

7. Can sediment traps be located to collect channelized runoff from disturbed soil areas prior to discharge? ☐Yes ☐No

   (a) Design sediment traps in accordance with the Construction Site BMP Manual. ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

Construction Site BMPs
Checklist CS-1, Part 3

Prepared by: _____ Date: _____ District-Co-Route: _____

PM (KP): _____ EA: _____

RWQCB: _____

Tracking Controls

Stabilized Construction Entrance/Exit (TC-1)

1. Are there points of entrance and exit from the project site to paved roads where mud and dirt could be transported offsite by construction equipment? (Coordinate with District Construction for selection and preference of tracking control BMPs.) ☐Yes ☐No

   (a) Identify and designate these entrance/exit points as stabilized construction entrances (TC-1). ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

Tire/Wheel Wash (TC-3)

1. Are site conditions anticipated that would require additional or modified tracking controls such as entrance/outlet tire wash? (Coordinate with District Construction.) ☐Yes ☐No

   Designate as a separate contract bid line item. ☐ Complete

Stabilized Construction Roadway (TC-2)

3. Are temporary access roads necessary to access remote construction activity locations or to transport materials and equipment? (In addition to controlling dust and sediment tracking, access roads limit impact to sensitive areas by limiting ingress, and provide enhanced bearing capacity.) (Coordinate with District Construction.) ☐Yes ☐No

   (a) Designate these temporary access roads as stabilized construction roadways (TC-2). ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

Street Sweeping and Vacuuming (SC-7)

1. Is there a potential for tracked sediment or construction related residues to be transported offsite and deposited on public or private roads? (Coordinate with District Construction for preference of including street sweeping and vacuuming with tracking control BMPs.) ☐Yes ☐No

   Designate as a separate contract bid line item. ☐ Complete

Construction Site BMPs
Checklist CS-1, Part 4

Prepared by: _____ Date: _____ District-Co-Route: _____

PM (KP): _____ EA: _____

RWQCB: _____

Wind Erosion Controls

Wind Erosion Control (WE-1)

1. Is the project located in an area where standard dust control practices in accordance with Standard Specifications, Section 10: Dust Control, are anticipated to be inadequate during construction to prevent the transport of dust offsite by wind? *(Note: Dust control by water truck application is paid for for through the various items of work. Dust palliative, if it is included, is paid for as a separate item.)* ☐ Yes ☐ No

   (a) Select SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-7 (Geotextiles, Plastic Covers, & Erosion Control Blankets/Mats), SS-8 (Wood Mulching) or a combination to cover the DSA subject to wind erosion year-round, especially when significant wind and dry conditions are anticipated during project construction. (Coordinate with District Construction for selection and preference of wind erosion control BMPs.) ☐ Complete

   (b) Designate as a separate contract bid line item. ☐ Complete

Construction Site BMPs
Checklist CS-1, Part 5

Prepared by: _____ Date: _____ District-Co-Route: _____

PM (KP): _____ EA: _____

RWQCB: _____

Non-Storm Water Management

Temporary Stream Crossing (NS-4) *& Clear Water Diversion* (NS-5)

1. Will construction activities occur within a waterbody or watercourse such as a lake, wetland, or stream? (Coordinate with District Construction for selection and preference for stream crossing and clear water diversion BMPs.) ☐Yes ☐No

   (a) Select from types offered in NS-4 (Temporary Stream Crossing) to provide access through watercourses consistent with permits and agreements.[1] ☐ Complete

   (b) Select from types offered in NS-5 (Clear Water Diversion) to divert watercourse consistent with permits and agreements.[1] ☐ Complete

   (c) Designate as a separate contract bid line item(s). ☐ Complete

Other Non-Storm Water Management BMPs

2. Are construction activities anticipated that will generate wastes or residues with the potential to discharge pollutants? ☐Yes ☐No

   (a) Identify potential pollutants associated with the anticipated construction activity and select the corresponding BMP such as NS-1 (Water Conservation Practices), NS-2 (Dewatering Operations), NS-3 (Paving and Grinding Operations), NS-7 (Potable Water/Irrigation), NS-8 (Vehicle and Equipment Cleaning), NS-9 (Vehicle and Equipment Fueling), NS-10 (Vehicle and Equipment Maintenance), NS-11 (Pile Driving Operations), NS-12 (Concrete Curing), NS-13 (Material and Equipment Use Over Water), NS-14 (Concrete Finishing), and NS-15 (Structure Demolition/Removal Over or Adjacent to Water).[1] ☐ Complete

   (b) Verify that costs for non-storm water management BMPs are identified in the contract documents. Designate BMP as a separate contract bid line item if the requirements in Construction Site Management (SSP 07-346) are anticipated to be inadequate or if requested by Construction. ☐ Complete

1. Coordinate with District Environmental for consistency with US Army Corps of Engineers 404 permit and Dept. of Fish and Game 1601 Streambed alteration Agreements.

Construction Site BMPs
Checklist CS-1, Part 6

Prepared by: _____ Date: _____ District-Co-Route: _____

PM (KP): _____ EA: _____

RWQCB: _____

Waste Management & Materials Pollution Control

Concrete Waste Management (WM-8)

1. Does the project include concrete pours or mortar mixing? ☐Yes ☐No

   (a) Select from types offered in WM-8 (Concrete Waste Management) to provide concrete washout facilities. In addition, consider portable concrete washouts and vendor supplied concrete waste management services. (Coordinate with District Construction for selection and preference of waste management and materials pollution control BMPs.) ☐ Complete

   (b) Designate as a separate contract bid line item if the quantity of concrete waste and washout are anticipated to exceed 5.2 yd^3 or if requested by Construction. ☐ Complete

Other Waste Management and Materials Pollution Controls

2. Are construction activities anticipated that will generate wastes or residues with the potential to discharge pollutants? ☐Yes ☐No

   (a) Identify potential pollutants associated with the anticipated construction activity and select the corresponding BMP such as WM-1 (Material Delivery and Storage), WM-2 (Material Use), WM-4 (Spill Prevention and Control), WM-5 (Solid Waste Management), WM-6 (Hazardous Waste Management), WM-7 (Contaminated Soil Management), WM-9 (Sanitary/Septic Waste Management) and WM-10 (Liquid Waste Management) ☐ Complete

   (b) Verify that costs for waste management and materials pollution control BMPs are identified in the contract documents. Designate BMP as a separate contract bid line item if the requirements in Construction Site Management (SSP 07-346) are anticipated to be inadequate or if requested by Construction. ☐ Complete

Temporary Stockpiles (Soil, Materials, and Wastes)

3. Are stockpiles of soil, etc. anticipated during construction? ☐Yes ☐No

   (a) Select WM-3 (Stockpile Management), SS-3 (Hydraulic Mulch), SS-4 (Hydroseeding), SS-5 (Soil Binders), SS-7 (Geotextiles, RECPs etc.), or a combination as appropriate to cover temporary stockpiles of soil, etc. ☐ Complete

(b) Select linear sediment barrier such as SC-1 (Silt Fence), SC-5 (Fiber Rolls), SC-6 (Gravel Bag Berm), SC-8 (Sand Bag Barrier), SC-9 (Straw Bale Barrier), or a combination to encircle temporary stockpiles of soil, etc. (Coordinate with District Construction for selection and preference of BMPs related to stockpiles.) ☐ Complete

(c) Designate as a separate contract bid line item if the requirements in Construction Site management (SSP 07-346) are anticipated to be inadequate or if requested by Construction. ☐ Complete

4. Is there a potential for dust and debris from construction material (fill material, etc.) and waste (concrete, contaminated soil, etc.) stockpiles to be transported offsite by wind? ☐Yes ☐No

(a) Select SS-7, temporary cover, plastic sheeting or other BMP to cover stockpiles subject to wind erosion year-round, especially when significant wind and dry conditions are anticipated during project construction. (Coordinate with District Construction for selection and preference of wind erosion control BMPs.) ☐ Complete

(b) Designate as a separate contract bid line item. ☐ Complete

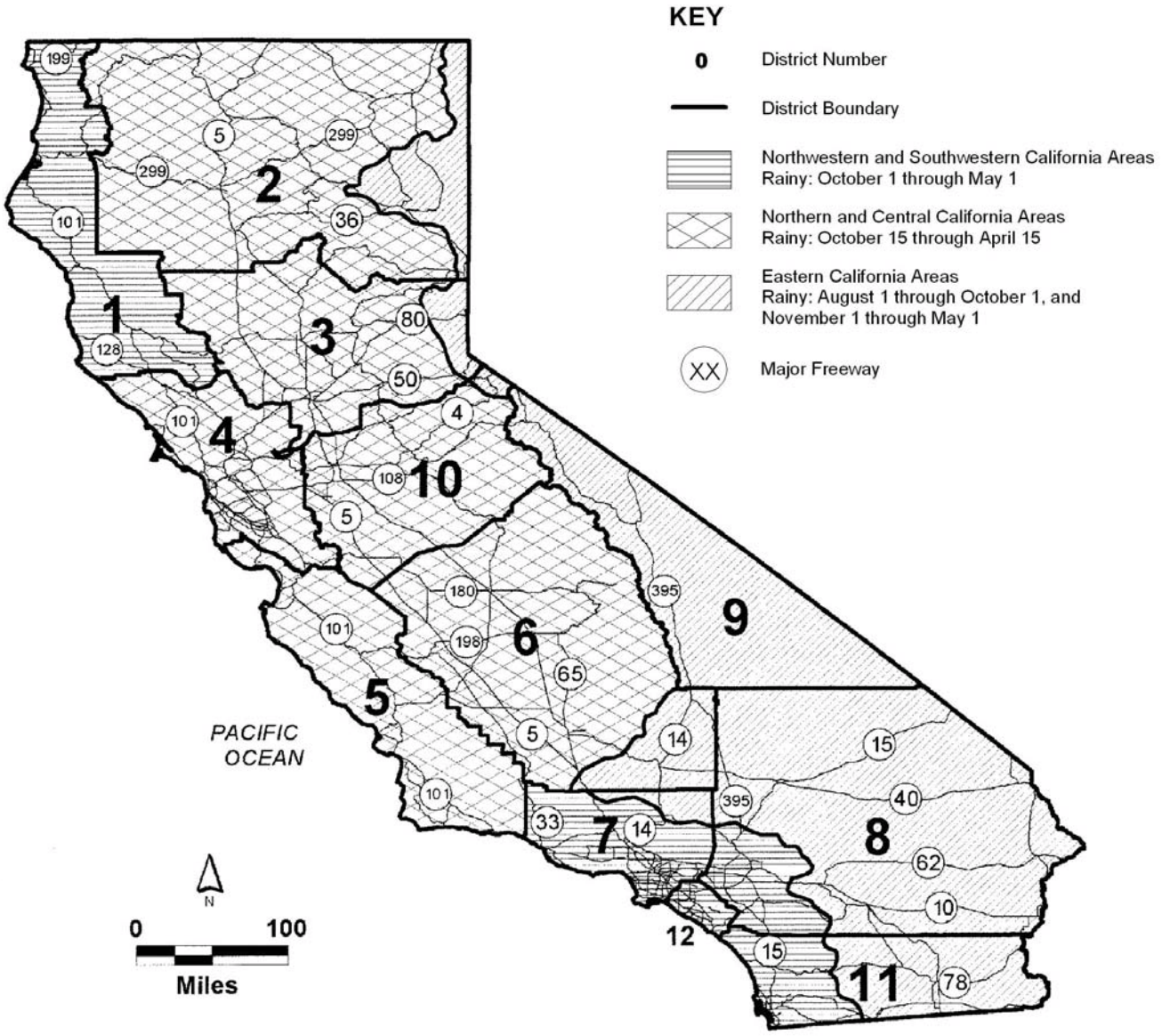

Figure 2-1
DESIGNATION OF RAINY SEASONS

Table 2-1

AREA DEFINITIONS		
AREA	**Applicability**	**Elevation**
1	**District 1** in the following areas: all of Del Norte and Humboldt Counties within 20 miles of the coast in Mendocino County	≤1200m (4000 ft)
2	**District 1** (except within Area 1) **District 2** within the North Coast, Lahontan, and Central Valley RWQCB jurisdictions **Districts 3, 4** and **5** **District 10** within the Lahontan RWQCB jurisdiction	<250m (800 ft)
3	**District 1** (except within Area 1) **District 2** within the North Coast, Lahontan, and Central Valley RWQCB jurisdictions **Districts 3, 4** and **5** **District 10** within the Lahontan RWQCB jurisdiction	250m – 1200m (800 ft - 4000 ft)
4	**District 6** within the Central Valley RWQCB jurisdiction **District 7** within the Central Coast, Los Angeles, and Central Valley RWQCB jurisdictions **District 8** within the Santa Ana and San Diego RWQCB jurisdictions **District 10** (except for the Lahontan RWCB jurisdiction) **District 11** within the San Diego RWQCB jurisdiction **District 12**	<500m (1650 ft)
5	**District 6** within the Central Valley RWQCB jurisdiction **District 7** within the Central Coast, Los Angeles, and Central Valley RWQCB jurisdictions **District 8** within the Santa Ana and San Diego RWQCB jurisdictions **District 10** (except for the Lahontan RWCB jurisdiction) **District 11** within the San Diego RWQCB jurisdiction **District 12**	500m – 1200m (1650 ft – 4000 ft)
6	**Statewide**	>1200m (4000 ft)
7	**District 6** within the Lahontan RWQCB jurisdiction **District 7** within the Lahontan RWQCB jurisdiction **District 8** within the Lahontan and Colorado River Basin RWQCB jurisdictions **District 9** **District 11** within the Colorado River Basin RWQCB jurisdiction	≤1200m (4000 ft)

Table 2-2

REQUIRED COMBINATION OF TEMPORARY SOIL STABILIZATION AND TEMPORARY SEDIMENT CONTROLS AND BARRIERS (6) (7)

NON-ACTIVE DISTURBED SOIL AREAS

SEASON	AREA(S)	TEMPORARY BMP	SLOPE (V:H) (1)			
			≤ 1:20	> 1:20 ≤ 1:4	> 1:4 ≤ 1:2	> 1:2
RAINY(2)	1 & 6	SOIL STABILIZATION (5)	X	X	X	X
		SEDIMENT BARRIER (5)	X	X	X	X
		DESILTING BASIN (3)		X	X	X
	2, 3, 4 & 5	SOIL STABILIZATION (5)	X	X	X	X
		SEDIMENT BARRIER		X	X	X
		DESILTING BASIN				
	7	SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB(8)				
NON-RAINY	1	SOIL STABILIZATION (5)	X(4)	X(4)	X	X
		SEDIMENT BARRIER		X(4)	X	X
		DESILTING BASIN				
	2 & 4	SOIL STABILIZATION				
		SEDIMENT BARRIER				
		DESILTING BASIN				
	3 & 5	SOIL STABILIZATION				
		SEDIMENT BARRIER				X(4)
		DESILTING BASIN				
	6	SOIL STABILIZATION (5)	X(4)	X(4)	X	X
		SEDIMENT BARRIER		X(4)	X	X
		DESILTING BASIN (3)				X
	7	SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB(8)				

(1) Unless otherwise noted, the temporary BMP is required for the slope inclinations indicated on slope lengths greater than 3 meters (10 feet).

(2) The maximum slope length is 30 meters (100 feet) for slope inclinations between 1:20 (V:H) and 1:2 (V:H) and 15 meters (45 feet) for steeper slopes.

(3) Required in addition to the temporary sediment barrier, where feasible. Feasibility will depend on site-specific factors such as available right-of-way within the project limits, topography, soil type, disturbed soil area within watershed, and climate conditions.

(4) Implementation of controls not required except at least 24 hours prior to all predicted rain events.

(5) The indicated temporary BMP is required on all slope lengths.

(6) Sediment controls and barriers include all temporary sediment control construction BMPs identified in the Statewide Storm Water Quality Practice Guidelines associated with the SWMP and Section 4 of these guidelines. Linear barrier systems are equivalent to what are referred to in the General Construction Permit as perimeter controls. The intent is prevent the transport of sediment at the downslope edge of disturbed soil areas.

(7) Permanent erosion control seeding shall be applied to all non-active areas deemed substantially complete during the project's defined seeding window.

(8) Refer to Section 2.2.6 for procedure.

Table 2-3

REQUIRED COMBINATION OF TEMPORARY SOIL STABILIZATION AND TEMPORARY SEDIMENT CONTROLS AND BARRIERS [6]

ACTIVE DISTURBED SOIL AREAS [3]

SEASON	AREA(S)	TEMPORARY BMP	SLOPE (V:H) [1]		
			≤ 1:20	> 1:20 ≤ 1:2	> 1:2
RAINY	1 & 6	SOIL STABILIZATION		X	X
		SEDIMENT BARRIER [4]	X	X	X
		DESILTING BASIN [2]		X	X
	2, 4 & 5	SOIL STABILIZATION			
		SEDIMENT BARRIER		X	X
		DESILTING BASIN [2]			X
	3	SOIL STABILIZATION			X[5]
		SEDIMENT BARRIER		X	X
		DESILTING BASIN [2]			X
	7	SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB[7]			
NON-RAINY	1	SOIL STABILIZATION			
		SEDIMENT BARRIER		X	X
		DESILTING BASIN[2]			X
	2, 3, 4 & 5	SOIL STABILIZATION			
		SEDIMENT BARRIER			
		DESILTING BASIN			
	6	SOIL STABILIZATION			
		SEDIMENT BARRIER		X	X
		DESILTING BASIN [2]			X
	7	SOIL STABILIZATION AND SEDIMENT CONTROL PRACTICES TO BE DETERMINED BY APPLICABLE RWQCB[7]			

(1) Unless otherwise noted, the BMP is required for the slope inclinations indicated on slope lengths greater than 3 meters (10 feet).

(2) Required in addition to the temporary sediment barrier, where feasible. Feasibility will depend on site-specific factors such available right-of-way within the project limits, topography, soil type, disturbed soil area within watershed, and climate conditions.

(3) Implementation of soil stabilization controls are not required except prior to predicted rain.

(4) The indicated temporary BMP required on all slope lengths.

(5) The indicated temporary BMP required on slope lengths greater than 15 meters (50 feet).

(6) Sediment controls and barriers include all temporary sediment control construction BMPs identified in the Statewide Storm Water Quality Practice Guidelines associated with the SWMP and Section 4 of these Guidelines. Linear barrier systems are equivalent to what are referred to in the General Construction Permit as perimeter controls. The intent is to provide a barrier to prevent the transport of sediment at the downslope edge of disturbed soil areas.

(7) Refer to Section 2.2.6 for procedures.

Table C-2: Temporary Soil Stabilization Criteria Matrix

CLASS	TYPE	TEMPORARY SOIL STABILIZATION CONTROL CRITERIA													
		Antecedent Moisture	Availability	Ease of Clean-Up	Installed Cost Per Acre	EC Effectiveness (%)	Degradability	Length of Drying Time (hrs)	Time to Effectiveness (days)	Longevity	Mode of Application	Residual Impact	Native	Runoff Effect	Water Quality Impact
CATEGORY: STANDARD BIODEGRADABLE MULCHES (SBM)															
Straw Mulch	Wheat Straw	D	S	H	$12,844	90-95	B	0	1	M	L/M	M		+	M
	Rice Straw	D	S	H	$12,844	90-95	B	0	1	M	L/M	M		+	L
Wood Fiber Mulch	Wood Fiber	D	S	H	$5,434	50-60	B	0-4	1	M	H	L		+	M
Recycled Paper Mulch	Cellulose Fiber	D	S	H	$5,187	50-60	B	0-4	1	S	H	L		+	L
Bonded Fiber Matrix	Biodegradable	D	S	H	$33,592	90-95	B	12-18	1	M	H	M		+	H
CATEGORY: ROLLED EROSION CONTROL PRODUCTS (RECP)															
Biodegradable	Jute Mesh	D	S	H	$39,520	65-70	B		1	M	L	M		+	UNK
	Curled Wood Fiber	D	S	H	$64,220	85-90	P/B		1	M	L	M		+	L
	Straw	D	S	H	$54,340	85-90	P/B		1	M	L	M		+	H
	Wood Fiber	D	S	H	$54,340	85-90	P/B		1	M	L	M		+	L
	Coconut Fiber	D	S	H	$79,040	90-95	P/B		1	L	L	M		+	L
	Coconut Fiber Mesh	D	S	H	$190,190	85-90	B		1	L	L	M		+	UNK
	Straw Coconut Fiber	D	S	H	$66,690	90-95	P/B		1	L	L	M		+	M
Non-Biodegradable	Plastic Netting	D	M	H	$12,350	<50	P		1	L	L	H		+	UNK
	Plastic Mesh	D	M	H	$19,760	75-80	P		1	L	L	H		+	UNK
	Synthetic Fiber with Netting	D	M	H	$212,420	90-95	P		1	L	L	H		+	UNK
	Bonded Synthetic Fibers	D	M	H	$298,870	90-95	P		1	L	L	H		+	UNK
	Combination with Biodegradable	D	M	H	$195,130	85-90	P		1	L	L	H		+	UNK
CATEGORY: TEMPORARY SEEDING (TS)															
High-Density	Ornamentals		S-M	H	$2470 - $9880	50-60			28	M-L	H	L-M	N/E	+	UNK
	Turf species		S	H	$2,223	50-60			28	L	H	M-H	N/E	+	UNK
	Bunch grasses		S-M	H	$1853 - $7904	50-60			28	L	H	L-M	N	+	UNK
Fast-Growing	Annual		S	H	$2223 - $3952	50-60			28	L	H	L-H	N/E	+	UNK
	Perennial		S	H	$1976 - $4940	50-60			28	L	H	M	N/E	+	UNK
Non-Competing	Native		S-M	H	$1729 - $9880	50-60			28	L	H	L-M	N	+	UNK
	Non-Native		S-M	H	$2470 - $2964	50-60			28	L	H	L-H	E	+	UNK
Sterile	Cereal Grain		S	H	$2,964	50-60			28	L	H	L	E	+	UNK
CATEGORY: IMPERVIOUS COVERS (IC)															
Plastic	Rolled Plastic Sheeting		S		$41,990	100	P		1	M	L	H		-	UNK
	Geotextile (Woven)		S		$36,556	90-95	P		1	M	L	H		-	UNK
CATEGORY: HYDRAULIC SOIL STABILIZERS (HSS)															
(PBS) Plant Material Based- Short Lived	Guar	D	S	H	$2,470	80-85	B	12-18	Same as Length of	S	B	L		0/+	M/L
	Psyllium	P	S	H	$2,470	25-35	B	12-18		M	B	L		0	L/H
	Starches	D	S	H	$2,470	25-30	B	9-12		S	H	L		0	L
(PBL) Plant Material Based- Long Lived	Pitch/ Rosin Emulsion	D	S	M	$7,410	60-75	B	19-24		M	B	M		-	H
(PEB) Polymeric Emulsion Blends	Acrylic polymers and copolymers	D	S	M	$7,410	35-70	P/C	19-24		L	B	M		+/-	L/M
	Methacrylates and acrylates	D	M	M	$2,470	35-40	P/C	12-18		S	W	L		0/+	L
	Sodium acrylates and acrylamides	D	M	M	$2,470	20-70	P/C	12-18		S	H	L		+/-	L/M
	Polyacrylamide	D	M	M	$2,470	55-65	P/C	4-8		M	H	L		0/+	L
	Hydro-colloid polymers	D	M	H	$2,470	25-40	P/C	0-4		M	H	L		0/+	L/M
(PRB) Petroleum/ Resin-Based Emulsions	Emulsified Petroleum Resin	D	M	L	$7,410	10-50	P/C	0-4		M	B	M		0/-	H
(CBB) Cementitious Based Binders	Gypsum	D	S	M	$4,940	75-85	P/C	4-8		M	H	L		-	M/H

= not applicable for category, class or type

UNK = unknown

See next page for Legend

Table C-2: Temporary Soil Stabilization Criteria Matrix (continued)

Antecedent Moisture	D P	Soil should be relatively dry before application Soil should be pre-wetted before application
Availability	S M	A short turn-around time between order and delivery, usually 3-5 days A moderate turnaround time, between 1-2 weeks
Ease of Clean-Up	L M H	Require pressure washing, a strong alkali solution, or solvent to clean up Requires cleanup with water while wet; more difficult to clean up once dry May be easily removed from equipment and overspray areas by a strong stream of water
Installed Cost		Dollars per acre
Degradability	C P B	Chemically degradable Photodegradable Biodegradable
Length of Drying Time		Estimated hours
Time to Effectiveness		Estimated days
Erosion Control Effectiveness		Percent reduction in soil loss over bare soil condition.
Longevity	S M L	1 - 3 months 3 – 12 months > than 12 months
Application Mode	L W H B M	Applied by hand labor Applied by water truck Applied by hydraulic mulcher Applied by either water truck or hydraulic mulcher Applied by a mechanical method other than those listed above (e.g., straw blower)
Residual Impact	L M H	Projected to have a low impact on future construction activities Projected to have a moderate impact on future construction activities Projected to have a significant impact on future construction activities
Native	N E	Plant or plant material native to the State of California Exotic plant not native to the State of California
Runoff Effect	+ 0 -	Runoff is decreased over baseline (bare soil) No change in runoff from baseline Runoff is increased over baseline
Water Quality Impact	L M H	Low potential to impact water quality Moderate potential to impact water quality Higher potential to impact water quality

C.1.1.1 Scheduling (SS-1)

This BMP involves developing, for every project, a schedule that includes sequencing of construction activities with the implementation of Construction Site BMPs such as temporary soil stabilization (erosion control) and temporary sediment control measures. The purpose is to reduce the amount and duration of soil exposed to erosion by wind, rain, runoff and vehicle tracking, and to perform the construction activities and control practices in accordance with the planned schedule.

Water Pollution Control - Status of Specifications
Office of Storm Water Management – HQ Div. of Design

Unless noted, all of the standard special provisions (SSPs) have been converted to Plain Language Version (PLV) in anticipation of the 2010 Specification effort. Many of the existing water pollution control SSPs will be absorbed into the published 2010 Standard Specifications.

Non-standard edits (NSSPs) must be cleared through the Office of Storm Water Management Design (OSWMD) unless a different owner is noted. Some specifications only exist as NSSPs and always require HQ concurrence.

Obtain approved SSPs: http://www.dot.ca.gov/hq/esc/oe/specifications/SSPs/2006-SSPs/Sec_10/

Obtain New Standard Plans: http://www.dot.ca.gov/hq/esc/oe/project_plans/Errata/2006-Errata-Listing.htm

SSP No.	Description	Detail	Std Plan	BEES	Comments
S5-760	Environmentally Sensitive Area	(none)	(none)	(none)	Div of Environmental Analysis (DEA) owns this SSP. Edits require DEA concurrence.
S5-630	Relations with CRWQCB	(none)	(none)	(none)	Possible future name change to "CRWQCB Requirements"
07-340	Water Pollution Control (WPCP)	(none)	(none)	074017	Not converted to PLV pending new Construction General Permit impacts.
07-345	Water Pollution Control (SWPPP)	(none)	(none)	074019	Not converted to PLV pending new Construction General Permit impacts.
07-346	Construction Site Management	(none)	(none)	074016	Includes all housekeeping BMPs. Added incidental sweeping. Revised to limit editing.
07-347	Temporary Active Treatment System	(none)	(none)	074015	Includes monitoring and discharge requirements.
07-350	Temporary Erosion Control (Cancelled)	(none)	(none)	074023	This SSP has been cancelled and replaced with other temporary soil stabilization BMP SSPs.
07-351	Temporary Hydraulic Mulch	(none)	(none)	074051	Basic hydromulch spec for fiber and a variety of tackifiers per the Construction Site BMP Manual.
07-352	Temporary Hydraulic Mulch (Cementitious Binder)	(none)	(none)	074052	Fiber and Cementitious Binder only.
07-353	Temporary Hydroseed	(none)	(none)	074053	Similar to SSP 07-351 with the option to add seed.
07-354	Temporary Tacked Straw	(none)	(none)	074054	Straw with the tackifiers listed in SSP 07-351.
07-360	Street Sweeping	(none)	(none)	074041	Use for projects >1 acre DSA. Not needed for smaller jobs because SSP 07-346 includes incidental sweeping.

07-370	Temp. Soil Stabilizer (Cancelled)	(none)	(none)	074025	This SSP was cancelled a few years ago since it spec'd products that no longer existed. Superseded by SSP 07-371.
07-371	Temporary Soil Binder	(none)	(none)	074055	Replaces SSP 07-370.
07-380	Temporary Mulch	(none)	(none)	074026	Mulch materials include bark and wood chips and compost.
07-381	Temporary Hydraulic Mulch (Bonded Fiber Matrix)	(none)	(none)	074040	BFM spec for soil stabilization on more severe slopes.
07-382	Temporary Hydraulic Mulch (Polymer Stabilized Fiber Matrix)	(none)	(none)	074039	PSFM spec for soil stabilization on more severe slopes.
07-390	Temp. Erosion Control Blanket	yes	T54 & T55	074027	Rolled Erosion Control Product (RECP) spec. Includes Erosion Control Technology Council (ECTC) specs.
07-395	Temporary Cover	yes	T53	074034	Geosynthetic fabrics for stockpile cover and slope cover.
07-405	Temp. Concrete Washout Facility	yes	T59	074032	Intended for jobs with very small amounts of concrete and washout waste.
07-406	Temp. Concrete Washout (Portable)	(none)	(none)	074042	Intended for jobs with very small amounts of concrete and washout waste.
07-407	Temp. Concrete Washout Bin	(none)	(none)	074043	Specs vendor supplied roll-off dumpster bins for concrete washout waste.
07-415	Temporary Check Dam	yes	T57	074035	
07-420	Temporary Fiber Roll	yes	T56	074028	
07-421	Temp. Large Sediment Barrier	yes	T66	074045	New SSP and Standard Plan for 18 to 22 inch diameter fiber rolls.
07-430	Temporary Silt Fence	yes	T51	074029	Do not use for wildlife exclusion fencing.
07-432	Temp. Reinforced Silt Fence	yes	T60	071324	New SSP. Includes details for 2 types of wire reinforced silt fence. Type 1 adds high visibility plastic fabric to double as ESA fence.
07-446	Temporary Fence (Type ESA)	yes	T65	071325	This SSP now has Standard Plan T65.
07-460	Temporary Straw Bale Barrier	yes	T52	074030	
07-470	Temporary Gravel Bag Berm	(none)	(none)	074031	

07-480	Temp. Construction Entrance	yes	T58	074033	Revised to include 3' to 6" rock and 3/4' to 2-1/2" aggregate.
07-481	Temp. Construction Roadway	yes	T67	074044	New SSP and Standard plan includes 3' to 6" rock and 3/4' to 2-1/2" aggregate.
07-485	Move In/Move Out (Temp. Erosion Control)	(none)	(none)	074037	SSP allows various types and does not need to be edited for particular soil stabilization practice. This SSP can be used with Move-in/Move-out (Erosion Control) (SSP 20-020).
07-490	Temp. Drainage Inlet Protection	yes	T61, T62, T63, T64	074038	Now has Standard Plans. Revised SSP requires only a single line of edits.
70-015	Drainage Inlet Marker	yes	D71	700617	Materials and installation of metal, plastic, and thermoplastic DI markers.
07-495	Temp. Creek Diversion System	yes	no	no	Obtain concurrence to use this NSSP from Office of Highway Drainage Design.
07-XXX	Temp. Clear Water Diversion	yes	no	no	Obtain concurrence to use this NSSP from Office of Highway Drainage Design.
07-XXX	Temp. Creek Crossing	yes	no	no	Obtain concurrence to use this NSSP from Office of Highway Drainage Design.
07-XXX	Temp. Sediment Basin	yes	no	no	NSSP
07-XXX	Temp. Turbidity Curtain	no	no	no	NSSP
07-XXX	Temporary Tire Wash	no	no	no	NSSP
07-XXX	Temp. Sand Bag Barrier	no	no	no	NSSP
07-XXX	Temp. Wildlife Exclusion Fence	no	no	no	NSSP
07-XXX	Temp. Batch Plant BMPs	no	no	no	NSSP

File name: WPC SSPs PLV Status 05-28-09

Caltrans District	RWQCB Dewatering Permits
1	Region 1 - Order No. R1-2009-0045 Region 5 - Order No. 5-00-175
2	Region 1 - Order No. R1-2009-0045 Region 5 - Order No. 5-00-175 Region 6 - Order Nos. R6T-2008-0023, R6T-2004-0025
3	Region 5 - Order No. 5-00-175 Region 6 - Order Nos. R6T-2008-0023, R6T-2004-0025
4	Region 1 - Order No. R1-2009-0045 Region 2 - Order No. R2-2007-0033 Region 3 - No General Dewatering Permit Region 5 - Order No. 5-00-175
5	Region 2 - Order No. R2-2007-0033 Region 3 - No General Dewatering Permit Region 5 - Order No. 5-00-175
6	Region 5 - Order No. 5-00-175 Region 6 - Order Nos. R6T-2008-0023, R6T-2004-0025
7	Region 3 - No General Dewatering Permit Region 4 - Order No. R4-2008-0032 Region 5 - Order No. 5-00-175 Region 6 - Order Nos. R6T-2008-0023, R6T-2004-0025
8	Region 6 - Order Nos. R6T-2008-0023, R6T-2004-0025 Region 7 - No General Dewatering Permit Region 8 - Order Nos. R8-2003-0061, R8-2005-0041, R8-2006-0004, R8-2009-0045 Region 9 - Order No. 2001-96
9	Region 6 - Order Nos. R6T-2008-0023, R6T-2004-0025
10	Region 2 - Order No. R2-2007-0033 Region 5 - Order No. 5-00-175 Region 6 - Order Nos. R6T-2008-0023, R6T-2004-0025
11	Region 7 - No General Dewatering Permit Region 9 - Order Nos. 2001-96, R9-2007-0034
12	Region 8 - Order Nos. R8-2003-0061, R8-2005-0041, R8-2006-0004, R8-2009-0045 Region 9 - Order No. 2001-96

Disclaimer: This list summarizes the RWQCB Dewatering Permits effective Aug, 21,2009. Design Engineers should verify the current permit and review it's condition with the District Stormwater Coordinator or the Regional Water Quality Control Board at each phase in project planning as permits are updated and conditions change.

Construction Site BMPs

Estimating Guidance for PID, PA/ED, & PS&E

Rev. October 24, 2008

Project Initiation Phase (PID)

For estimating the total cost of construction site BMPs for the PID phase, Table 1 may be used. To use this table, add the adjustments that apply for the particular project and then multiply the total estimated construction cost by the total of adjustments.

Table 1- Construction Site Water Pollution Control

Description	Recommended Adjustment (%)
Baseline Cost Percentage	1.25 [1]
Adjustment for Project Magnitude (Cost)	
$0 to $1,000,000	2.00
$1,000,000 to $1,500,000	1.25
$1,500,000 to $12,000,000	0.25
Greater than $12,000,000	0.00
Adjustment for Location (RWQCB)	
Region 9 (San Diego)	0.75
All other Regions	0.00
Adjustment for Type of Project	
Highway Planting (Landscaping)	0.10
All other projects	0.00
Adjustment for Work near 303(d) Water Bodies	
Work near 303(d) Water Bodies	Project Specific[2]
Adjustment for Project Specific Issues	
Project specific issues such as environmental sensitivity, monitoring, dewatering and discharge restrictions, permits, extreme construction conditions (coastal, mountain, urban), etc.	Project Specific[2]
Total Adjustments for Water Pollution Control	(sum)

[1] Baseline cost percentage of 0.75 is based upon actual construction costs for projects completed in 2003, 2004 and 2005 as described in the Water Pollution Cost Report prepared in 2005. Increase baseline percentage to 1.25 or higher as necessary to reflect cost increases since 2005.

[2] Engineer preparing estimate should discuss the cost implications of project specific issues with District NPDES Coordinator and District Construction Storm Water Coordinator.

Example:

For an interchange modification project consisting of structure widening, ramp realignment, and embankment construction, the estimated cost is $16,000,000. The project is located in San Diego County and is within RWQCB Region 9. The project drains to an unlisted water body. The adjustment factor is based upon the following:

Baseline Cost Percentage	1.25
Greater than $12,000,000	0.00
Adjustment for Location (RWQCB 9))	0.75
Adjustment for Type of Project	0.00
Adjustment for Work near 303(d) Water Bodies	0.00
Adjustment for Project Specific Issues	0.00
Total Adjustments for Water Pollution Control	2.00

The PID phase estimate for water pollution control is $320,000 ($16,000,000 x 2.00%).

Project Approval/Environmental Document Phase (PA/ED)

Table 1 may also be used to estimate water pollution control at the PA/ED phase. However, as additional information is developed for the project, the estimate should be refined to reflect local conditions and project specific concerns. Historical water pollution control cost data from similar projects in the District should be used to revise the estimate. Tentative BMP selections and rough quantities can be developed toward the end of the PA/ED phase.

Plans, Specifications, and Estimate (PS&E)

At the PS&E phase, the water pollution control estimate should be segregated into separate bid items for the BMPs selected as appropriate for the individual project. The familiar cost break-down table and its associated lump sum item for water pollution control has been eliminated in favor of separate bid and supplemental work items. These can be estimated as follows:

074017 Prepare Water Pollution Control Program

074019 Prepare Storm Water Pollution Prevention Plan

Use Table 2 to estimate the cost of preparing the written document describing the implementation of the project's water pollution controls. Projects with less than one (1) acre of soil disturbance will have Prepare Water Pollution Control Program (WPCP). Projects with one (1) acre or more disturbed soil area will have Prepare Storm Water Pollution Prevention Plan (SWPPP). Prepare SWPPP will often include the cost to prepare the Sampling and Analysis Plan (SAP).

Table 2- Construction Site Water Pollution Control

Total Construction Cost	Prepare SWPPP	Prepare WPCP
$0 to $500,000	$5,000	$3,000
$500,000 to $1,000,000	$6,000	$5,000
$1,000,000 to $1,500,000	$6,000	$5,000
$1,500,000 to $12,000,000	$6,000	-
Greater than $12,000,000	$10,000	-

074016 Construction Site Management

Since we do not have a lot of history on bids for the lump sum for the new Construction Site Management (SSP 07-346) item, our guidance will be to use the result from Table 1 as a starting figure but then subtract out costs for all separate BMPs included. As a rule-of-thumb, Construction Site Management cost should be no lower than what is estimated for Prepare SWPPP (or Prepare WPCP).

066597 Storm Water Sampling and Analysis

Supplemental work items for Storm Water Sampling and Analysis (monitoring) are typically overestimated. It has been suggested that funds should only be included for projects that drain into a 303(d) water body listed for sediment or turbidity. Supp Work funds are not needed for non-visible pollutant testing as the conditions requiring testing rarely arise. Since information on what has been paid out for Storm Water Sampling is difficult to obtain, this extra work item should be estimated at the same rate as for Prepare SWPPP. This would be incremented for each rainy season anticipated and only included for sediment and turbidity listed waters.

066596 Additional Water Pollution Control

The Supp Work item for Additional Water Pollution Control will cover the addition of WPC BMPs suggested by the RE or Contractor. This is expected to be minor for most projects. As such, it is suggested to use the same rate as for Prepare SWPPP (or Prepare WPCP).

066595 Water Pollution Control Maintenance Sharing

The Supp Work item for Water Pollution Control Maintenance Sharing still exists but has been shifted to the individual separate item BMPs that allow 50/50 cost sharing. Water Pollution Control Maintenance Sharing cost should be no lower then the amount estimated for Prepare SWPPP (or Prepare WPCP). The following may be used to estimate BMP maintenance costs based upon input from District 11. The aggregate total of estimated maintenance costs would be combined into item WPC Maintenance Sharing:

a) Temp. Silt Fence, estimate at 10% of the separate item cost per rainy season.
b) Temp. Fiber Roll, estimate at 10% of the separate item cost per rainy season.
c) Temp. Erosion Control and other hydraulically applied soil stabilization BMPs, estimate at 10% of the separate item cost per rainy season.
d) Temp. Gravel Bag Berm, estimate at 25% of the item cost per rainy season.
e) Temp. Drainage Inlet Protection, estimate at 25% of the item cost per rainy season.
f) Temp. Construction Entrance, estimate at 25% of the item cost per rainy season.

Example Projects:

For large projects with substantial soil disturbance (DSA), several rainy seasons, or both, the inclusion of Water Pollution Control Maintenance Sharing is not questioned. For smaller projects with little DSA, less than one rainy season, or a small number of working days, some guidance is needed to determine if the supplemental work item is required. These examples should help:

Example 1. For short duration projects that consist of paving or asphalt overlay with no soil disturbance, maintenance cost sharing is not required. Since the supplemental work funds for maintenance cost sharing are required by the BMP SSP, there is no requirement if there are no BMP SSPs (SS, SC, or TC). The requirement to protect drain inlets is covered under SSP 07-346 "Construction Site Management" as described under "Paving, Sealing, Sawcutting, and Grinding Operations".

Example 2. For small projects with a minimal amount of DSA and most of the activity occurring outside of a single rainy season, a minor amount of funds should be included for maintenance cost sharing. For WPCP projects of less than 120 days, include at least $500.

Example 3. For an overlay project that includes shoulder backing that is graded to original grade, there will be minor soil disturbance occurring outside of the rainy season. Since this DSA will be covered by the shoulder backing, impacts are extremely small so soil stabilization and sediment control contract items are not considered necessary. Consequently, maintenance cost sharing will also not be included.

Example 4. For a Culvert Replacement project, there will be some DSA, but it will be constructed in the summer per Dept. of Fish & Game permit. Since the DSA will quickly be covered by AC and RSP, and since the job will be completed outside of the rainy season, no soil stabilization or sediment controls are considered necessary. Again, maintenance cost sharing is not be included because the SSPs requiring the item are not included.

Example 5. For a Bridge Approach Slab Replacement project, there is minimal DSA so no BMPs other than construction site management and portable concrete washout are included. Since all the DSA will be covered with concrete and the concrete washout SSP does not have the supplemental work requirement, maintenance cost sharing is not included.

Example 6. For some reason, a small project that was scheduled for summer construction is delayed into the rainy season. BMPs that were originally considered unnecessary may now be needed. In these situations, soil stabilization, sediment control, and other BMPs along with maintenance cost sharing may need to be added to the job by contract change order (CCO).

074XXX All other Separate Item BMPs

For the variety of separate contract item BMPs such as hydraulic mulch or silt fence, the Item Cost database on the OE website will be sufficient. The items mentioned above are not tracked so other methods must be used as tools for guidance.

State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: DISTRICT DIRECTORS

Date: October 2, 2006

From: RICHARD D. LAND
Chief Engineer

Subject: Incorporating Construction Site Best Management Practices into Projects during Design

This memo supersedes the memo, *Incorporating Temporary Construction Site Best Management Practices into Projects during Planning and Design*, dated December 18, 2002, signed by Brent Felker, Chief Engineer.

The California Department of Transportation (Department) recognizes the value of incorporating construction site best management practices (BMPs) into projects throughout the various phases of design with emphasis on PS&E. In November 2004, the Department assembled a BMP Incorporation Team represented by Environmental, Construction, and Design staff from both the Districts and Headquarters, and the construction industry to explore improving this process. The team has recommended that a better assessment of the project site conditions and anticipated construction activities be done during project design. Based upon this assessment, appropriate construction site BMP's would then be selected and included as separate contract bid items rather than one lump sum item. Some districts have already successfully implemented many elements of this new process.

New guidance, specifications, and procedures have been developed to support this improved process. For all Plans, Specifications, and Estimate (PS&E) submitted to Division of Engineering Services, Office Engineer on or after December 1, 2006, districts shall incorporate construction site BMPs as separate bid items using the new and revised water pollution control Standard Special Provisions (SSPs) and guidance provided in the latest version of the Storm Water Quality Handbook - Project Planning and Design Guide (PPDG). Earlier implementation is encouraged if it can be accomplished without delays to project delivery.

The incorporation of construction site BMPs into project planning and design should result in statewide consistency for contract documents. The inclusion of separate bid items should lead to more consistent bids with less disparity between bidders for stormwater items, easier contract administration, and more timely installation and maintenance of construction site BMPs.

Project engineers are required to select and estimate construction site BMPs when developing the project PS&E. At a minimum, designers shall provide a quantity table on the Summary of Quantities sheet, indicating approximate locations or stationing of construction site BMPs, as part of the PS&E package. The determination of the degree and level of detail of construction

site BMPs to be included in the contract documents should be discussed between District construction and design staff during the Project Initiation Document, Project Approval and Environmental Document, and PS&E phases of the project.

All projects shall follow the procedures set forth in the PPDG to develop a strategy for addressing stormwater during construction. The PPDG includes the Construction Site Consideration Form and the Construction Site Checklists and is available for download on the Caltrans intranet at:
http://www.dot.ca.gov/hq/oppd/stormwtr/PPDG-with-revisions-7-26-05.pdf

As described in the PPDG, pertinent information used to develop the construction site BMP strategy and quantities (plans, calculations, etc.) shall be provided in the Resident Engineer file and made available in the Information Handout.

District Construction shall follow the procedures set forth in the Division of Construction Policy Directive (CPD) 05-6. This CPD describes the responsibilities of the District's Construction representative for the review of Design's BMP strategy, selection, and estimate during the various phases of planning and design is available at:
http://www.dot.ca.gov/hq/construc/CPDirectives/CPD05-6.pdf

Training on Construction Site BMPs and their incorporation into the project planning and design process is currently available. Additional information on the revised Standard Special Provisions (SSPs) and guidance on estimating construction site BMPs is available on the Design intranet website at:
http://pd.dot.ca.gov/design/stormwater.asp

If you have any questions or comments regarding this memo or available training, please contact your Regional or District Project Development Storm Water Advisory Team representative, or Timothy Sobelman, Chief, Office of Storm Water Management Design, at (916) 653-5747 or CalNet 8-453-5747.

c: Division Chiefs
Deputy District Directors
Project Managers
Oversite Engineers
District NPDES Coordinators

Sample Water Pollution Control Table for Quantity Summary Sheets

WATER POLLUTION CONTROL

LOCATION			TEMPORARY SILT FENCE	TEMPORARY DRAINAGE INLET PROTECTION	TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)	TEMPORARY FIBER ROLLS	TEMPORARY CONCRETE WASHOUT FACILITY	TEMPORARY CONSTRUCTION ENTRANCE	MOVE-IN/ MOVE-OUT (EROSION CONTROL)
STATION	SIDE		(FT)	(FT)	(SQYD)	(FT)	(EA)	(EA)	(EA)
	LT	RT							
Sta M Line 92 to 155	X	X	8,600	12	260,000	4,600	22	6	-
Sta M Line 155 to 160	X	-	2,300	2	18,000	1,200	6	2	-
Sta M Line 160 to 162	-	X	950	-	12,000	280	-	1	-
Sta CC Line 12 to 13	X	X	2,020	2	-	800	2	2	-
Sta B Line 2 to 5	X	-	1,130	-	-	120	-	1	-
TOTAL			15,000	16	290,000	7,000	30	13	8

WATER POLLUTION CONTROL

LOCATION	TEMPORARY SILT FENCE	TEMPORARY FIBER ROLLS	TEMPORARY CHECK DAM	TEMPORARY EROSION CONTROL	TEMPORARY FENCE (TYPE ESA)	TEMPORARY CONSTRUCTION ENTRANCE	MOVE-IN/ MOVE-OUT (TEMP.EROSION CONTROL)
	(FT)	(FT)	(FT)	(SQYD)	(FT)	(EA)	(EA)
Location 1	1220	3600	-	34,000	120	2	-
Location 2	1280	2800	-	16,000	-	1	-
Location 3	260	420	60	12,000	230	1	-
TOTAL	2760	6820	60	62,000	350	4	6